

# NEWSLINE

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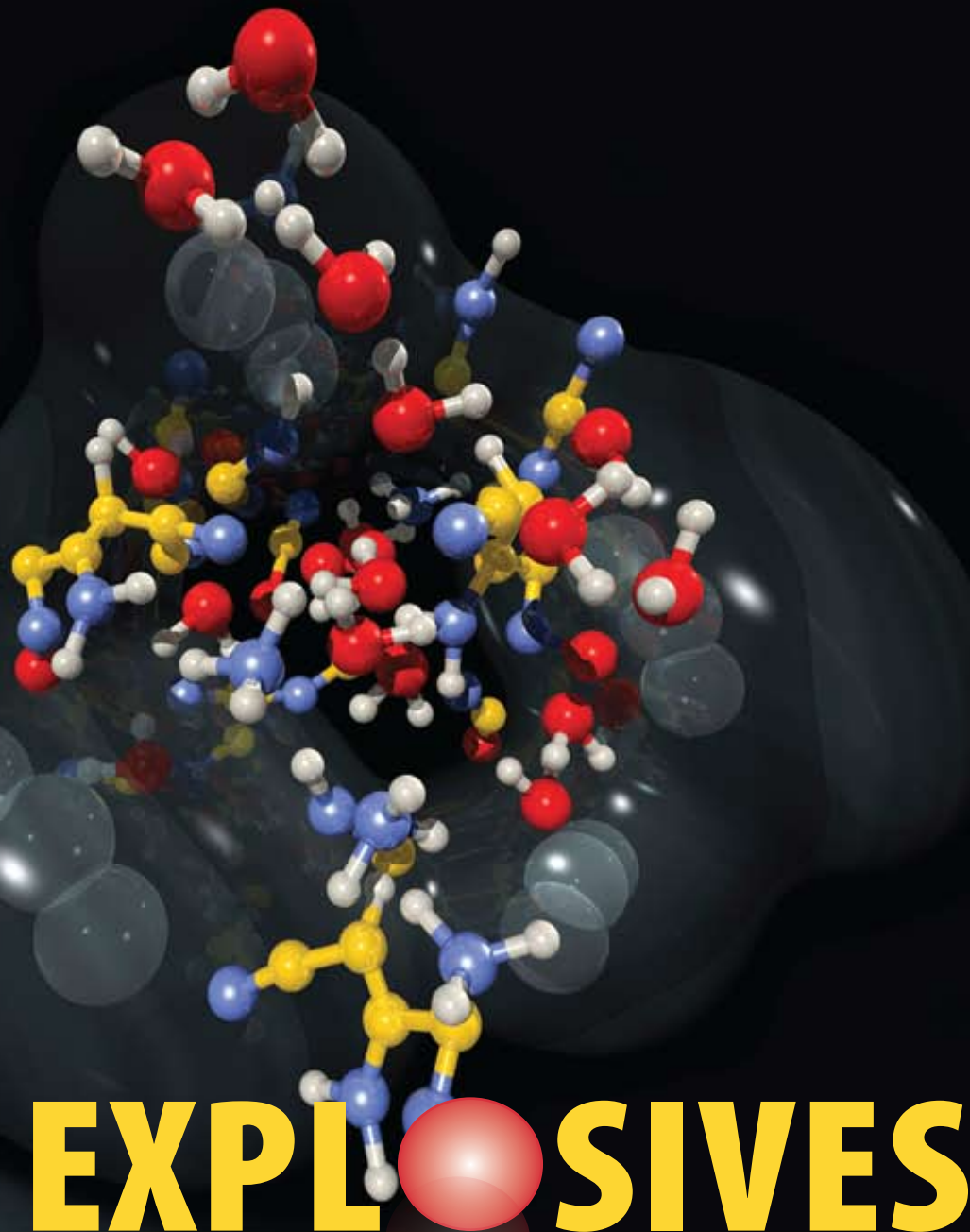
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# EXPLOSIVES

## AT THE MICRO-SCALE

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## Laboratory launches cost-cutting initiatives

### Information technology



The Laboratory is launching an initiative to curb Information Technology costs by reducing purchases of laptops, desktop computers and servers.

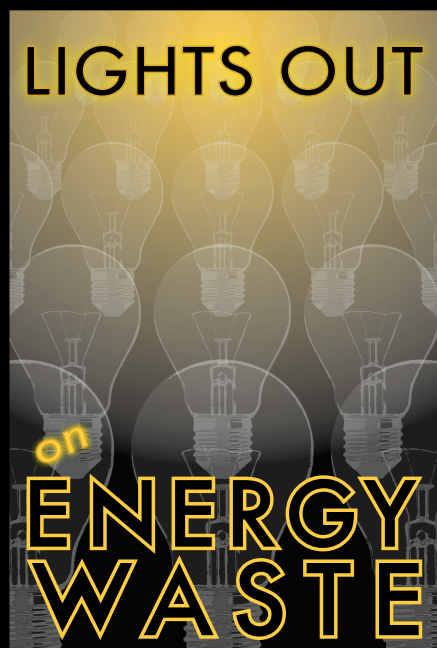
Director George Miller and the principal associate directors (PADs) have directed Ken Neves, LLNL's chief information officer, to set up a Labwide process for reducing Information Technology (IT) costs. Neves will establish baseline expenditures for each directorate within the five Principal Directorates based on expenditures from the last fiscal year (2007). PADS will aim to reduce costs in FY2008 according to the percentage they represented of last year's baseline IT purchase.

For example, if a PAD was 30 percent of last year's IT purchases, it will be asked to take responsibility for 30 percent of savings this year. Senior management will set an overall savings target.

"We're looking at ways to reduce information technology costs by deferring new or replacement purchases while providing full support to the programs and the fulfillment of our mission obligations," Neves said.

The IT activities of each organization will be tracked and periodic reports presented to Miller and Deputy Director Steve Liedle.

## Energy savings campaign continues



The Laboratory has announced a campaign, "Every watt counts," to save energy. The cumulative efforts should spare the environment and cut up to \$2.2 million in costs.

"The principal associate directorates will compete to save energy," Energy Champion and Laboratory Deputy Director Steve Liedle announced to Laboratory senior management this week. Employees will be the key in reducing energy consumption by 9 percent in fiscal 2008. Significant savings are required this year in response to executive orders and Department of Energy directives.

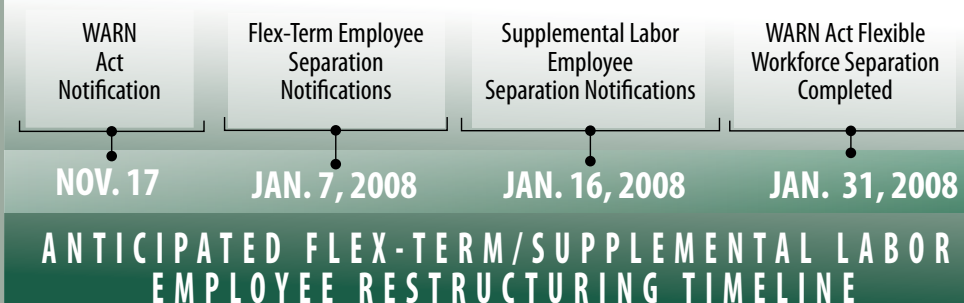
"Without the voluntary actions of our employees, such as turning out lights

when not in use, turning down thermostats in the winter and turning them up in the summer, we will not make the goal," said Howard Walls, manager of the Plant Engineering Department. "We need to manage energy as the precious resource that it is," he added. "You'd be surprised what good it does if you turn off the lights."

The friendly competition will be facilitated through the Energy Management Program of the Site Utilities Division. The year-long competition will take place in phases, starting with selection of participating buildings and building groups by the directorates. Formation of competition teams and certification of fiscal 2007 baselines will follow. Details of the competition will be announced over the next few weeks.

The cumulative impact of many collective efforts could reduce the Lab's projected \$24 million annual electrical energy expense to the tune of an estimated \$2.2 million.

The campaign offers employees additional satisfaction beyond seizing the opportunity to achieve a challenging goal. "It is good for the environment and is the right thing to do," Walls said.



## Services available to term/SLO employees

Many resources are available for employees who may be impacted by workforce restructuring. Strategic Human Capital Management has organized several events for employees to take a pro-active approach in managing their job search.

Visit a new external Website at <https://careerstrategies.llnl.gov/> that contains helpful job search information and upcoming events.

### Want to re-acquaint yourself with the job-search process?

Attend a job search strategies and tools workshop. Presented by HR staff, this briefing covers traditional and new trends in job searching. Check the Web at <https://careerstrategies.llnl.gov/documents/StrategiesandToolsPresentation.ppt> for the agenda and presentation.

Dates: Every Wednesday starting Dec. 12 (except Dec. 26 and Jan. 2.)

Time: 1:30-3 p.m.

Location: Bldg. 543 auditorium

### Want help with your resume?

Bring a copy or a draft to a resume one-on-one drop-in clinic. Or come by if you just don't know where to start. HR staff will review your resume, provide you with constructive feedback and offer resume writing resources.

Dates: Tuesdays and Fridays through Dec. 28

Time: 1-3 p.m.

Location: Bldg. 571, room 1039

### Want to learn about community resources available to job-seekers?

Attend an info session about employment centers with folks from San Joaquin County WorkNet at <http://www.sjworknet.org/index.html> and the Tri-Valley One-Stop Career Center at <http://www.trivalleyonestop.com/tvjobseek.htm>. These one-stop offices are affiliated with the state and have everything you need for a successful job search: workshops, resume development, wage and labor market information, benefits information, interview preparation, and more.

Date: Thursday, Dec. 20

Time: 1:30-3 p.m.

Location: Bldg. 571, Room 2301

### Want to meet local employers and learn about job opportunities?

Meet actively recruiting local employers at our upcoming career fair. Offered in collaboration with IAP, more than 15 companies will be available to meet and discuss job opportunities. Go to the Web at <https://careerstrategies.llnl.gov/job-fairsandboards.html> for helpful tips and to print out your admission ticket.

Date: Wednesday, Dec. 19

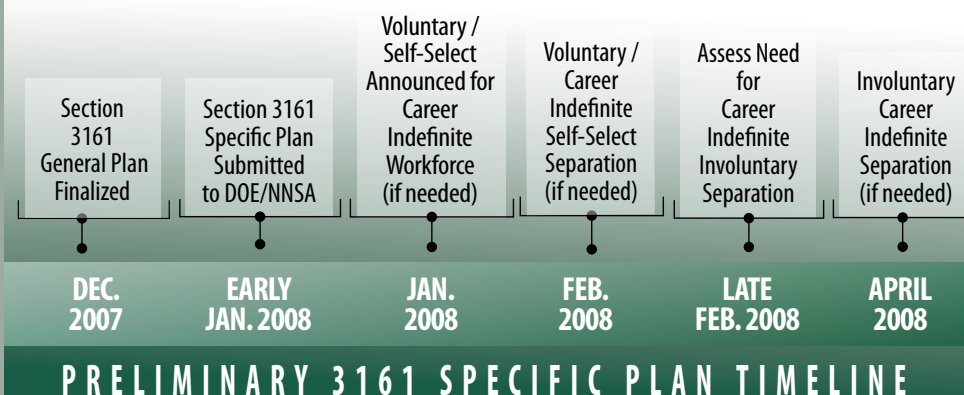
Time: 11 a.m.-4 p.m.

Location: Trailer 4675, old central cafeteria

### Want to find out about potential opportunities with LLC parent companies?

LLNL is collecting information about employees to facilitate their consideration for career opportunities with LLC parent companies. Interested employees would sign a release and submit a resume and a brief profile of their background and skills.

Additional information on this activity will be available soon on the Web at <https://careerstrategies.llnl.gov/>.







## Payroll Office announces new customer hours

LLNL Payroll Office telephone and customer service hours will change to 10 a.m.-3 p.m., Monday through Friday, effective Monday, Dec. 17. LITE customer service hours also will change to 7 a.m.-3 p.m., Monday through Friday, effective Monday, Dec. 17. Employees also can contact Payroll

by e-mailing [llnl-payroll@llnl.gov](mailto:llnl-payroll@llnl.gov)

Employees are reminded that major payroll functions are available through LAPIS Self Service at <https://psapp.llnl.gov/pspps89prd/?cmd=login>. Payroll and LITE information and forms continue to be available on the payroll and LITE Websites at <https://www-cfo.llnl.gov/organization/ad/pr/> and <http://lite.llnl.gov/>.

## Pre-Tax transportation program limit to increase to \$115 per month in 2008

The Pre-Tax Transportation Program limit will increase to \$115 per month in 2008. Current participant elections in the LLNS Pre-Tax Transportation Program will continue in 2008.

Employees who wish to make a change in the amount of their pre-tax transportation deduction must submit a change to the Benefits Office. Employees should contact the Benefits Office at 2-9955 or go to Bldg. 571, room 1205 to obtain a change form.

Non-exempt or hourly paid employees who wish to change their deduction to be effective on their Jan. 4 paycheck must submit a form no later than Dec. 20. Exempt or salaried employees who wish to change their deduction to be effective on their Jan. 11 paycheck must submit a form no later than Jan. 3.

The Pre-Tax Transportation Program was revised effective Jan. 1, 2007. Following are specific rules and guidelines for the program:

The IRS regulations specifically state that unused amounts in reimbursement accounts can not be refunded for any reason. Per plan guidelines, unclaimed funds remaining in your account can not be refunded, per the IRS tax regulation. Any unused funds are forfeited to LLNS at termination of employment, or if you fail to submit receipts in a timely manner (within 180 days of payment of the expense) to Payroll for reimbursement.

Any unused portion of the monthly statutory limit can be carried over to subsequent months, up to 180 days after the expense is paid including into the next tax year.

To avoid any forfeiture, it is the employee's responsibility to monitor unused elected compensation reductions during the year, especially during the latter part of the calendar year, or if you are planning to terminate employment or stop participating in the Pre-Tax Transportation Program.

For questions, call the Benefits Office at 2-9955.



Editor's note: Following transition to management under Lawrence Livermore National Security, LLC, several rumors are circulating regarding the Lab's policies and procedures. *Newsline* will use this space to address these issues regularly.

### **Rumor: The Laboratory will be shutting down the TID Main Library in an effort to save money.**

Fact: There are no plans to shut down access to library resources – although some directorates have their own libraries and these will remain open at their discretion. A committee has been formed to look at the most cost-effective way to access the broadest library resources possible and areas where we can streamline. For example, TID recently closed a trailer that houses library personnel, in an effort to consolidate space and save money.

### **Rumor: LLNS will choose which charities to send the \$1 million it is donating to the HOME Campaign.**

Fact: LLNS has allocated \$1 million in matching funds for the HOME Campaign. For every dollar an employee donates to charity of his or her choice, LLNS will match that dollar to the same charity. Because the HOME Campaign has surpassed the \$1 million mark, LLNS will prorate its contributions.

### **Rumor: The Lab is segregating flex-term employees into a different class so they can be subject to the impending reduction in force, whereas the career indefinite employees are not subject to the same.**

Fact: Flex-term appointments were created to provide staffing flexibility to meet ever changing program needs at the Laboratory. Laboratory policy, along with flex-term job offer letters, state that a flex-term appointment may be terminated at any time for various reasons, including budget issues. Director George Miller has stated he will evaluate the Laboratory's budget situation in January and make a decision at that time regarding the career indefinite workforce.

### **Rumor: The Laboratory will lay off all EBAs (employees between assignments).**

Fact: Should an involuntary reduction in force occur, the Laboratory will evaluate critical skills that must be maintained in order to meet mission requirements. Not all employees and work groups will be included in a voluntary or involuntary reduction. This includes EBAs.

## REMINDER

### **Reminder for employees with outstanding 403(b) loans**

Employees with outstanding 403(b) loans should contact FITSCo before the end of the year to make payment arrangements.

Employees have two options:

- Repay the outstanding balance in full, or
- Arrange for monthly electronic funds transfers (EFTs) with FITSCo. The loan repayment terms will not change. Setting up the initial EFT can take up to 10 business days. Note: If you choose this option, you must make up any missed payments in order to avoid defaulting on your loan.

Employees may contact FITSCo at [netbenefits.com](http://netbenefits.com) or 1-866-682-7787 to make the necessary arrangements.

Note that if you do not take action regarding your loan payment arrangements, the outstanding principal will be reported as a distribution in 2008, subject to income tax and (if applicable) state and federal tax penalties.

## SCIENCE NEWS

## Explosives at the nanoscale produce shocking results

By Anne M. Stark  
Newsline staff writer

U.S. troops blew up enemy bridges with explosives in World War II to slow the advance of supplies or enemy forces.

In modern times, patrollers use explosives at ski resorts to purposely create avalanches so the runs are safer when skiers arrive.

Other than creating the desired effect (a destroyed bridge or avalanche), the users didn't exactly know the microscopic details and extreme states of matter found within a detonating high explosive.

In fact, most scientists don't know what happens either.

But researchers from the Laboratory and the Massachusetts Institute of Technology have created the first quantum molecular dynamics simulation of a shocked explosive near detonation conditions, to reveal what happens at the microscopic scale.

What they found is quite riveting: The explosive, nitromethane, undergoes a chemical decomposition and a transformation into a semi-metallic state for a limited distance behind the detonation front.

Nitromethane is a more energetic high explosive than TNT, although TNT has a higher velocity of detonation and shattering power against hard targets. Nitromethane is oxygen poor, but when mixed with ammonium nitrate can be extremely lethal, such as in the bombing of the Alfred P. Murrah Federal Building in Oklahoma City.

"Despite the extensive production and use of explosives for more than a century, their basic microscopic properties during detonation haven't been unraveled," said Evan Reed, the lead author of a paper appearing in the Dec. 9 online edition of the journal, *Nature Physics*. "We've gotten the first glimpse of the properties by performing the first quantum molecular dynamics simulation."

In 2005 alone, 3.2 billion kilograms of explosives were sold in the United States for a wide range of applications, including mining, demolition and military applications.

Nitromethane is burned as a fuel in drag racing autos, but also can be made to detonate, a special kind of burning in which the material undergoes a much faster and far more violent type of chemical transformation. With its single nitrogen dioxide (NO<sub>2</sub>) group, it is a simple representative version of explosives with more NO<sub>2</sub> groups.

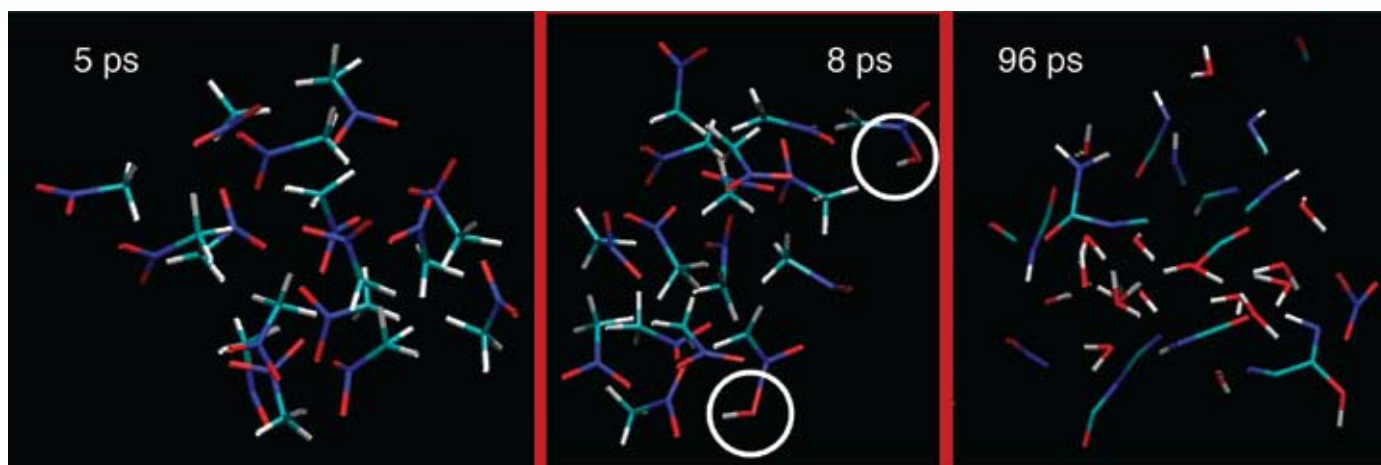
Though it is an optically transparent, electrically insulating material, it undergoes a shocking transformation: It turns into an optically reflecting, nearly metallic state for a short time behind the detonation shock wave front.

But further behind the wave front, the material returns to being optically transparent and electrically insulating.

"This is the first observation of this behavior in a molecular dynamics simulation of a shocked material," Reed said. "Ultimately, we may be able to create computer simulations of detonation properties of new, yet-to-be synthesized designer explosives."

Other Livermore researchers include M. Riad Manaa, Laurence Fried and former Lab chemist Kurt Glaesemann, as well as J.D. Joannopoulos of MIT.

The work was funded by the Laboratory Directed Research and Development program.



Snapshots during a simulation of detonating nitromethane at three different times:

At 5 picoseconds behind the detonation shock front (1 picosecond = one millionth of a millionth of one second), the shock has compressed the nitromethane molecules into a hot, dense liquid-like state. The first reactions occur around 8 picoseconds: hydrogen atoms are transferred to the oxygen atoms on the same molecule (white circles). Near the end of the simulation at 96 picoseconds, a mixture of transient and stable molecules exist, including H<sub>2</sub>O, CO<sub>2</sub>, HNC and HNCO. (Carbon = green, Hydrogen = white, Nitrogen = blue, Oxygen = red.)

**"We've gotten the first glimpse of the properties by performing the first quantum molecular dynamics simulation."**

— Evan Reed

On the cover: Sparks are emitted from rapid chemical reactions in an energetic material. This microscopic view shows a mixture of reaction intermediates observed during a computer simulation of detonating nitromethane.

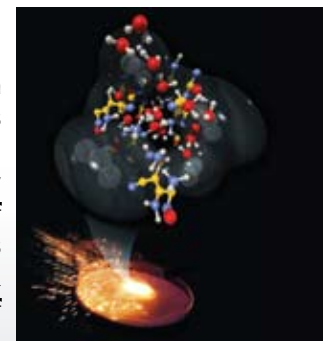


ILLUSTRATION  
BY SCOTT DOUGHERTY



# Global warming threatens west's water resources

By Anne M. Stark  
Newsline staff writer

The Rocky Mountains have warmed by 2 degrees Fahrenheit. The snowpack in the Sierras has dwindled by 20 percent and the temperatures there have heated up by 1.7 degrees Fahrenheit.

It could all lead to dire consequences for the water supply in the western United States, including California.

Scientists have noted that water flow in the western United States has decreased for the last 20 to 30 years, but had never explained why it was happening.

Until now. Benjamin Santer of the Lab's Program for Climate Model Diagnosis and Intercomparison and colleagues Celine Bonfils, Govindasamy Bala, and Art Mirin and collaborators from Scripps Institution of Oceanography at UC San Diego, have for the first time pinpointed the cause of that diminishing water flow on a regional scale: humans.

Santer and Scripps colleague Tim Barnett presented the research Tuesday at the annual fall meeting of the American Geophysical Union.

"We looked at whether there is a human-caused climate change where we live, and in aspects of our climate that we really care about," Santer said. "No matter what we did, we couldn't shake this robust conclusion that human-caused warming is affecting water resources here in the western United States."

**"The results are being driven by temperature change. And that temperature change is caused by us."**

— Tim Barnett

By looking at air temperatures, river flow and snowpack over the last 50 years, the team determined that the human-induced increase in greenhouse gases has seriously affected the water supply in the western United States. And the future only brings more of the same.

"It's pretty much the same throughout all of the western United States," Barnett said. "The results are being driven by temperature change. And that temperature change is caused by us."

The team scaled down global climate models to the regional scale and compared the results to observations over the last 50 years. The results were solid, giving the team confidence that they could use the same models to

predict the effects of the global scale increase in greenhouse gases on the western United States in the future.

The projected consequences are bleak. By 2040, most of the snowpack in the Sierras and Colorado Rockies would melt by April 1 of each year because of rising air temperatures. The earlier snow melt would lead to a shift in river flows.

The shift could lead to the flooding in California's Central Valley. Currently, state reservoirs are filled during the rainy season. As the water is drawn down, the reservoirs are replenished with snow melt from the Sierras.

If that snow melts earlier, as predicted in the climate models, the reservoirs could overflow.

"We are headed for a water crisis in the western United States and it's already started," Barnett said. "A couple of decades ahead, we might not have that snowpack, making us more susceptible to flooding."

Santer said the increase in predicted river flow should be a wake up call to officials that the water supply infrastructure needs to be updated now as opposed to waiting until the situation is urgent.

As for the warming, with the existing greenhouse gas in the atmosphere, the Earth will continue to warm for the next 80-100 years.

"As someone who has seven grandchildren, that scares the hell out of me," Barnett said. "I've seen the future and I don't like it."

## Installation of NIF final optics begins

Workers in cleanroom garb install one of the first of 192 Integrated Optic Modules (IOM) onto the target chamber of the National Ignition Facility. Each IOM will contain crystal plates that convert the frequency of NIF's laser beams from infrared to ultraviolet. Other optics inside the IOMs incorporate beam conditioning, focusing, diagnostic sampling and debris shielding capabilities. The beams enter the 10-meter diameter target chamber in groups of four. Each grouping of four IOMs is known as a Final Optics Assembly (FOA). Installation of the FOAs is expected to continue throughout the next year.

BOB HIRSCHFELD/NEWSLINE





# Workforce brokering committee established at Lab

In order to facilitate the best utilization of the members of the Lab's career indefinite workforce, a Brokering Committee has been established with representatives from each PAD and Directorate. Members of the Brokering Committee work together to place employees who are currently between assignments (EBA's) into existing openings across the Laboratory.

The committee began meeting weekly on Dec. 3. Each broker is knowledgeable about both the skills of the EBAs in their organization and about current job openings. Potential matches are discussed at the meeting and/or offline, said Tammy Jernigan, as-



sociate director for Strategic Human Capital Management. She co-chairs the committee with Engineering Associate Director Steve Patterson.

"Brokers have a lot of incentive to place their people," she said. "We want to place people as quickly and efficiently as possible. This is a focused effort in response to our current budget pressures and uncertainties."

The number of employees between assignments is low, but fluctuates. At the current time there is no cut-off for how long a career indefinite employee is in that status. For more information, see the Dec. 3 *NewsOnLine* article, "New hiring practices announced."

## SCIENCE NEWS

# Understanding variations in cancer drug effects

*By Nancy Garcia  
Newsline staff writer*

Not all cancers are created equal. Neither are all patients. That is why researchers from the Lab and the University of California, Davis hope to use accelerator mass spectrometry (AMS) to understand variations in chemotherapy drug action.

They hope their analysis of samples from an upcoming clinical trial will help physicians tailor effective therapies.

"If this works, it will be a revolution in cancer treatment," said Sang Soo Hah, who launched the project two years ago as a Laboratory post-doctoral fellow. The long-range goal would be to use a new statistical knowledge base or discover biomarkers that indicate which patients are less resistant to chemotherapy.

They will examine specimens from 60 patients in a clinical study at the UC Davis Cancer Center. Patients to be enrolled will have either breast or bladder cancer. Individual cases of these cancers vary in their response to the second-generation platinum-based anticancer drug, carboplatin.

Carboplatin binds DNA, with the largest effect in rapidly dividing cells. This binding distorts the DNA structure, which generally leads to cell death. Cancer cells are among the most rapidly dividing cells. (So are hair follicles, making them susceptible to chemotherapy's temporary side effect of hair loss). The hypothesis is that some patients have better DNA repair capacity, making them resistant to the treatment.

Because AMS is so sensitive, it is possible to detect levels of a radioactively labeled substance from "A to Z," that is, from attomole (10<sup>-18</sup>) to zeptomole (10<sup>-21</sup>). The doses

of <sup>14</sup>C can be kept to between nano-Curies and micro-Curies, which is less than 1 percent of a year of background exposure. With this level of sensitivity, AMS can detect as little as 10,000 atoms in less than 30 seconds.

The drug is modeled after a similar fore-runner, cisplatin. Both work by entering the cell nucleus where platinum contained in the drug binds DNA. Eventually DNA becomes cross-linked, impairing cell division and cell function. Study criteria include never having been treated with a platinum-containing drug before.

Patients will initially receive 1/100th of the normal drug dose. Drug uptake and DNA binding will be measured over 24 hours in samples of white blood cells. In addition, about 10 percent of patients will have their tumors biopsied.

Study subjects will next receive normal levels of chemotherapy treatment with the drug, and their progress will be followed for 18 months. Factors to be tracked include tumor size, side effects and survival rate.

"Early detection and new drug development are of course important," Hah said, "but I believe the improvement of traditional treatment is more important."

In order to develop a technique that identifies chemoresistance so oncologists can customize a patient's treatment step by step, he conducted test-tube studies of drug-DNA interaction and investigated cultured cells, their media, and their DNA to create a picture of drug uptake and retention. He has worked for the past four years with LLNL researcher Paul Henderson, who became an assistant adjunct professor in the medical center in the past year. Their UC Davis collaborators are Dr. Chong-Xian Pan, an assistant professor, and Dr. Ralph de Vere White, director of the center. In October, the team received two-

year funding through a Laboratory Directed Research and Development grant. In addition, Pan has received American Cancer Society funding for the work.

The researchers plan to investigate dosing using small animals prior to the clinical study.

"It's important that we've developed a way to isolate DNA and submit it to AMS," Henderson said. "We hope to enable individual therapeutic strategies, to convert from a feasibility study to treatment options."

Cisplatin is most widely prescribed for testicular, ovarian, bladder, lung, and stomach cancers. Carboplatin is used in combination with other drugs to treat ovarian and lung cancer. When it cross-links double strands of DNA, its carbon-containing portion, which is labeled with <sup>14</sup>C, falls off. Another drug, oxaliplatin which is FDA approved for colorectal cancer treatment, retains its radiolabeled carbon during DNA cross-linking, and was subject to a recently published study by Hah, Henderson, de Vere White, and Rhoda Sumbad and Ken Turteltaub of LLNL. Their paper, published online Nov. 15 in *Chemical Research in Toxicology*, examined dynamics of cross-linking in DNA extracts and in cultured cancer cells. By retaining its radioisotope label, this drug allowed tracking the cell-specific differentiation of DNA cross-linking with time, supporting their hypothesis that different cancer cell types and/or different cancer patients may have contrasting abilities to repair DNA damage and tolerate platinum chemotherapy. The sensitivity offered by their method is the highest reported to date, enabling human studies to be conducted in the near future without exposure of the patients to radioactivity doses greater than that of a cross-country plane trip, that may ultimately open the possibility of personalized medicine.



## PEOPLE NEWS

### Reis visits the Lab

Vic Reis, senior adviser to the Energy Secretary, visited the Lab this week to receive briefings from senior Lab managers. Reis has primary responsibility for the Global Nuclear Energy Partnership, part of President Bush's Advanced Energy Initiative. He is also a member of the Strategic Advisory Group to the U.S. Strategic Command.

Reis served as assistant secretary for Defense Programs in the Department of Energy from 1993 to 1999, where he led the development of DOE's Stockpile Stewardship Program.

From 1991 to 1993, he was director of Defense Research and Engineering (DDR&E) at the Pentagon, the principal adviser in the Office of the Secretary of Defense for scientific and technical matters, basic and applied research, laboratories and early development of defense weapons systems. He also chaired the Nuclear Weapons Council. Earlier, he served as deputy director and then director of the Defense Advanced Research Projects Agency (DARPA).

At left: John Harvey, senior technical adviser for the National Nuclear Security Administration, Vic Reis, senior adviser to DOE, and the Lab's Ron Lehman met for special briefings earlier this week.

JACQUELINE MCBRIDE/NEWSLINE

## IN MEMORIAM

### Ronald Joseph Nagel

Ronald Joseph Nagel, a Lab retiree who worked in the Mechanical Engineering Department, died Dec. 9, at home in Livermore after a year and a half battle with cancer. He was 75.

Nagel was born Sept. 9, 1932, in Oakland. He graduated from Berkeley High School in 1951. He served in the U.S. Army from 1953 to 1955.

He joined LLNL in 1961 as a mechanical designer and retired in 1991 from Applied Research in Engineering as a design superintendent.

During his 30-year career, he supported various

Magnetic Fusion Energy projects, including Baseball II, TMX and MFTF. Retired Project Manager Tony Chargin recalled, "I came into the Lab as a brand new engineer with a master's degree and thought I knew it all until Ron taught me how to be an engineer. He was my mentor."

Nagel moved to Livermore in 1966. He had a variety of interests including the Ford Model A club in Sonoma. He restored the 1930 Model A Ford that he drove in high school.

Nagel spent most of his retirement traveling with his

wife and family, and researching his family's genealogy.

He is survived by his wife of 56 years, Josephine Nagel; his children, Michael Nagel, David Nagel and Ronna Oelrich; seven grandchildren; and sister Coral Clark.

Visitation and rosary will be held on Tuesday, Dec. 18 from 4-8 p.m. at Callaghan Mortuary in Livermore. Funeral services will be held Wednesday, Dec. 19, at 11 a.m., at St. Michael's Church in Livermore.

In lieu of flowers, donations may be made to the American Cancer Society.

### Thomas E. Wainwright

Thomas Wainwright, retired Lab physicist and E. O. Lawrence Award winner, died Nov. 27. He was 80.

Wainwright was born Sept. 22, 1927, to Eyre Bennett Wainwright and Susan Wainwright in Seattle, Wash. He lived in Southgate, Calif. until the age of four and then moved with his family to Montana in 1932, where he grew up with his three brothers.

As a boy, he delivered the *Liberty Magazine* and earned the rank of Eagle Scout. He attended Butte High School and the University of Utah in 1945 in preparation to join the U.S. Army Air Corps and served through 1947 as a cryptographer on the island of Guam.

Wainwright received a bachelor's degree in physics and engineering from Montana State College in Bozeman,

Mont. and a doctorate degree in physics from Notre Dame University in 1954.

He then moved to Livermore and began his career at the Laboratory.

He became division leader of the Theoretical Physics Division in 1971. In 1973 he won the prestigious Ernest O. Lawrence Award that recognizes scientists and engineers for exceptional contributions in research and development. Wainwright received the award for his work in the area of weapons and innovative advances in the study of transport and hydrodynamics.

In 1974, he became a Fellow of the American Physical Society. He retired from the Lab in 1988 and continued as an associate into the early 1990s.

Wainwright's work at the Lab included research on the electron band structure of metals, nuclear weapons theory and design, nuclear weapons effects, theory of fluids and computational physics.

He was a member of the California Genealogical Society. He enjoyed archaeology, history and hiking. He was also a member and past treasurer of the P.G. Wodehouse Society, Blanding's Castle Chapter.

Wainwright is survived by his wife, Mary Elizabeth "Beth" (Long); five children; and ten grandchildren.

Services were held at St. Mary's Church in Walnut Creek, with his brother, Father Donald Gene Wainwright officiating. Burial took place in Livermore.

### Newsline want ads temporarily unavailable

The want ads Website is temporarily unavailable. Because of related technical issues, the want ads will not appear in today's edition of *Newsline*. More information and updates on the want ads system upgrade will be provided in future editions of *NewsOnLine* and *Newsline*.

## NEWSLINE

Newsline is published weekly by the Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

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For an extended list of Lab beats and contacts, see <http://www.llnl.gov/pao/contact/>



# HELPING OTHERS MORE EFFECTIVELY

## A closing message from this year's HOME Campaign chair



"The HOME Campaign is coming to a strong close and our community is going to benefit greatly from the support of everyone that helped on this year's campaign.

This charity drive is put together by a large team of dedicated volunteers that has worked months with the sole purpose of helping others. I want to thank all of the employees who contributed, as well as the employees who helped coordinate all of the activities.

Without all of the time and energy that these employees contributed, the HOME Campaign would not be as successful. Together we made a difference."

— Dustin Riggs

## Campaign donation deadline is here

The final deadline for donations to the 2007 HOME Campaign is close of business today, Friday, Dec. 14. Go to the Web at <https://home.llnl.gov/donations/index.php> to make your pledge.

## HOME Incentive Program winners for weeks 4 and 5



NIF and Photon Science Deputy PAD Jeff Wisoff (center) drew prizes recently for the HOME Campaign Incentive Program winners of weeks 4 and 5. Prize winners gathered in Bldg. 482's Atrium on Dec. 12 as Wisoff, drew prizes for both week's winners. Steve McConnell and David Polley each received a \$50 West Valley Mall gift card; Alan Throop received a gift certificate from It's All About Dancing; John Knezovich, John Gyllenhaal, Joe Satcher and Norm Burkhard each received a \$10 Strings gift certificate; Wren Carr received a round of golf for two from Las Positas Golf Course; Jan Winfield received park admission for two to Paramount's Great America; Michael Singleton and Sandy Williams each received a paraffin hand treatment from Luminary Spa; John Scott received a Friday or Saturday two-night stay with breakfast at the Sheraton Pleasanton Hotel; Steve Louis received a \$10 Kampai Sushi gift card; Kathy Dyer received a Cedar Mountain Winery private tour and tasting for six people; John Celeste received a Wente Vineyards/Tomas Estates private tour and tasting for six people; Stewart Brown received a relaxing package of paraffin hand treatment and bathrobe from Parc 55 Hotel in San Francisco; and Bryan Balazs received a Fantasy Forum Actors Ensemble/f our tickets to "The Biggest Gift," a Christmas show for families and children.

AS OF DEC. 13

## HOME Campaign statistics

**Employee participation** — 26 percent

**Amount donated** — \$1,237,547

**Number of employee contributions** — 1,894

**Lead directorate employee participation**

— NIF & Photon Science with 51 percent

**Go to <https://home.llnl.gov> to view all PAD and Lab Organization statistics.**

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